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ABSTRACT

Children, parents, and child caregivers are vulnerable to several infectious diseases as a result of contact with child care centers. This pilot program, implemented in a rural county in a southeastern state, was designed to enhance knowledge and skills related to improved hygiene practices in a child care setting. The target audience for the training was caregivers and parents of children attending seven centers housed within public schools and churches in a rural, predominantly African American county. Participating were 22 staff and 8 parents. The training took approximately 1 hour and consisted of 4 components: (1) a videotape, "The ABCs of Clean," and discussion of hygiene practices; (2) a handout on preventing contact infections through hand washing, personal hygiene, and sanitizing eating utensils and surfaces; (3) presentation and discussion of the "Hooray for Hand Washing Teachers' Packet," including several educational materials; and (4) demonstration and practice teaching of handwashing. Evaluation data were obtained through a mail questionnaire and a follow-up survey. The findings indicated that participants responded positively to the training, with 92 percent saying that they would teach hand washing to their children. The follow-up survey revealed that the instructional resources were useful in daily lessons, participants were practicing proper hand washing with their children more often, and half of the participants had sent at least two of the flyers home to parents. Participants reported that children were washing their hands noticeably more often, at appropriate times, and for a longer length of time at each washing. (KB)

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EVALUATING A HYGIENE EDUCATION PROGRAM FOR CHILD CARE WORKERS

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The following study was funded through a cooperative agreement between the Centers for Disease Control and Prevention and Association for Schools of Public Health. The study described herein was a part of a larger community-based enteric disease prevention and control intervention.

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ABSTRACT

Child care (away from the home) has become the normal way of life for thousands of children across the United States. Infants, toddlers, parents, and child caregivers are vulnerable to a variety of infectious diseases as a result of contact with child care centers. This paper will describe the results of one pilot program, implemented in a rural county in a Southeastern state, designed to enhance knowledge and skills related to improved hygiene practices in a child care setting. The materials and methods used are described and came from a variety of sources, one of which was the *Soap and Detergent Association.* The targeted audience for the training was caregivers and parents of children attending seven child care centers. Parents were invited because they too have a primary responsibility for the health of their child. Short term positive impacts were reported as a result of having participated in the hygiene program. This suggests that hygiene training programs for child caregivers do not have to be expensive, nor elaborate to enhance the health and well-being of children. These procedures could easily be replicated with other groups. However, the study has several limitations: the design was non-experimental posttest only, subject numbers were small, and changes in behavior were self-reported. Further study is needed. The intent of this paper is to encourage others to view hygiene training for child caregivers as important.

EVALUATING A HYGIENE EDUCATION PROGRAM FOR CHILD CARE WORKERS

Petri, Cynthia J., Winnail Scott D., Geiger, Brian F., Artz, Lynn M, Mason, J. Walter

Introduction. Child care (away from the home) has become the normal way of life for thousands of children across the United States. Infants, toddlers, parents, and child caregivers are vulnerable to a variety of infectious diseases as a result of contact with child care centers. These include infectious diarrhea, rubella, cytomeglovirus, hepatitis A, and haemophilus influenza type B.[1] Factors contributing to the increased incidence of infectious diseases among children attending these centers include attendance of non-toilet-trained children; staff combining diaper changing and food preparation duties; large enrollment; high staff-to-child ratio; and poor hygiene and child handling practices.[2] Several disease prevention and control measures can reduce the spread of infectious diseases. Education and training in good personal hygiene, frequent hand washing, separating changing areas from food handling and eating areas, routine cleaning and disinfecting of environmental surfaces and personal items, and exclusion of any child or child care worker with diarrhea.[3] This paper will describe the results of one pilot program, implemented in a rural county in a Southeastern state, designed to enhance knowledge and skills related to improved hygiene practices in a child care setting. Funding for this project was provided through a three-year cooperative agreement between the Association for Schools of Public Health and the U.S. Centers for Disease Control and Prevention.

Target audience. The targeted audience for the training was caregivers and parents of children attending seven child care centers. Parents were invited because they too have a primary responsibility for the health of their child. Parents are also seen as essential components of Head

Start and other child care facilities.[4] The child care centers were housed within public schools and churches in a rural, underserved, and predominantly African American county. The county is among the poorest in the nation with nearly 50% of the 13,500 residents living below the federal poverty line.[5] Seven child day care centers were identified with the assistance of a school system administrator, social worker from the county department of human resources, and members of a local school health task force. Four participating centers were federally funded Head Start programs, one was an Even Start program, and two were church-based programs. Child care center directors received telephone calls and letters to invite them to participate in a free inservice education program.

Methods. The average length of the training sessions was about one hour and consisted of 4 components:

1. Presentation of a 15-minute videotaped program, *The ABCs of Clean*[6], followed by a discussion of the main points. Video content featured situations when hand washing is essential to good health, methods to teach children about hand washing, sanitary practices for day care facilities, and safe storage of chemicals.
2. Distribution and discussion of *Preventing Germ Spread*[7], a handout created by the project staff. The handout featured simple text and pictures to explain direct and indirect transmission of germs, prevention of contact infections through hand washing, personal hygiene practices, and sanitizing eating utensils and contact surfaces in the classroom.
3. Presentation and discussion of *Hooray for Hand washing Teachers' Packet*[8]. Each caregiver received a packet of classroom resource materials. Contents included materials purchased from the Soap and Detergent Association and materials adapted by the Healthy

Kids Program from a variety of sources. Packet contents included: The ABCs of Clean Teacher's Guide, Hooray for Hand washing audio cassette with songs about hand washing, Hooray for Hand washing poster and storybook, Hooray for Hand washing coloring sheets, Sudsy Bubble poster, and A Family Guide to Better Health flyer (all by the SDA); Sudsy Bubble coloring books, Hippo in the Tub coloring books, 5 Dirty Germs finger poem, and Hand washing Rules for Home and School handout (all developed by the Healthy Kids Program).

4. Demonstration and practice teaching of hand washing. Participants learned effective ways to teach children when and how to wash their hands. They were encouraged to teach correct hand washing by demonstrating and practicing with the child and to count or sing a song to assure that the child lathers for the recommend 10-15 seconds. Participants then paired off at sinks to practice hand washing instruction with one person playing the role of the child.

At the end of each presentation, participants were given an evaluation form, a stamped, addressed envelop in which to return the form, and a small incentive to encourage return of the evaluation form. The mail-back evaluation was process in nature, rather than impact. Approximately one month after receiving the training, a follow-up survey to assess impact was conducted via telephone with one representative from each intervention site.

The methods and materials used to train groups of caregivers and parents in child care centers were pretested in a church-based center in a different county with two groups of caregivers. Both methods and materials received favorable reviews. Only slight modifications were necessary.

Results. Staff and parents from a total of seven child care centers received the training. This included 22 staff and eight parents (n=30). One week after the training program, project staff called child care center directors to remind them to return the evaluation forms. Forty-three percent of the participants returned a completed evaluation form by mail. The results of the process evaluation can be seen in Table 1.

INSERT TABLE 1

The responses to the training were very positive. Most participants (77%) agreed that the *ABCs of Clean* video was helpful and easy to understand. The video was also perceived to be an appropriate length for the presentation (77% agreed). Two respondents did not view the video and one person responded "strongly disagree" to every item on the evaluation.

There were similar responses reported for the *Preventing Germ Spread* handout. Most participants (92%) agreed that the handout was helpful and easy to understand. Most (92%) agreed that "amount of time spent discussing the handout was about right." Responses were identical for the *Hooray for Hand washing Teachers' Packet.* One person "strongly disagreed" for all items. With regard to the hand washing demonstration and teaching practice portion of the training session, most participants (85%) agreed that the practice activity was useful, however 2 persons disagreed. Ninety-two percent of the participants said that they would teach hand washing to their children. Regarding the amount of time spend on the practice activity, most participants (92%) agreed that the amount of time spent on the practice activity was about right. One person disagreed.

A few respondents provided additional comments about the training they received. All were positive remarks. Thirty-one percent of the participants commented on the video, saying

that it "was very enjoyable and educational," and that it "..brought to my attention a couple of things, I would not have thought of." Comments were likewise positive toward the *Preventing Germ Spread* handout and the *Teachers' Packet*. Thirty-nine percent commented regarding the practice teaching activity. In general, comments relayed the message that participants already taught this daily and that the method shown was helpful. Some also commented that by using the songs and counting exercise, that hand washing could be made fun!

A telephone follow-up after training indicated three impacts: 1. The instructional resources had proven useful in daily educational lessons, 2. Participants were teaching and practicing proper hand washing with their children more often, and 3. Half of the participants had sent at least two of the flyers about hand washing home to parents. Additionally, it was reported that children were washing their hands noticeably more often, at appropriate times, and for a longer length of time at each washing. It was also reported that parents and teachers had made modifications to their hygiene behaviors. Staff reported doing such things as using antibacterial soap, washing and sterilizing toys more often, disinfecting floors and toilets more often as well as washing their hands "all the time now." Tables 2 - 4 record the responses to the follow-up survey.

INSERT TABLES 2-4

Discussion. It is sometimes taken for granted that everyone knows the proper method and frequency of hand washing. Comments made by the participants in this program indicate that health educators and other public health workers can not take hand washing behavior for granted. The fact that the participants viewed the materials presented as valuable suggests that they were not bored nor did they already know everything that was presented. It also appears that the

combination of activities utilized was beneficial to the audience.

According to the follow up interviews, there was an increase in positive hygiene behaviors for both staff and their children. Additionally, it was reported at follow up that the materials left with staff were found to be useful. The materials reported to be most useful included the teacher's guide, Sudsy Bubble Poster, Hooray For Hand washing poster and the Hooray for Hand washing story book. Also, 45% of the participating centers reported sending at least two of the handouts home to parents.

Short term impacts were reported as a result of having participated in the hygiene program. This suggests that hygiene training programs for child caregivers do not have to be expensive, nor elaborate to enhance the health and well-being of children. These procedures could easily be replicated with other groups. However, the study has several limitations: the design was non-experimental posttest only, subject numbers were small, and changes in behavior were self-reported. Further study is needed. The intent of this paper is to encourage others to view hygiene training for child caregivers as important.

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TABLE 1. Process Evaluation Results of Hygiene Education Program for Child Care Workers. (n = 13)

KEY
SA = strongly agree
A = agree
NO = no opinion
D = disagree
SD = strongly disagree

	Frequency (Percentage)			
	SA	A	D	SD
The ABCs of Clean Video				
1. The information presented will help me as a Day Care Teacher.	9 (69%)	1 (8%)	0	1 (8%)
2. The video was easy to understand.	9 (69%)	1 (8%)	0	1 (8%)
3. The length of the video was about right.	6 (46%)	4 (31%)	0	1 (8%)
Preventing Germ Spread Handout				
1. The information presented will help me as a Day Care Teacher.	11 (85%)	1 (8%)	0	1 (8%)
2. The material was easy to understand.	11 (85%)	1 (8%)	0	1 (8%)
3. The amount of time spent discussing this was about right.	8 (62%)	4 (31%)	0	1 (8%)
Hooray for Hand washing Teachers' Packet				
1. The material contained in this packet will be useful in talking with my children.	11 (85%)	1 (8%)	0	1 (8%)
2. I will use the material found in the teachers' packet.	11 (85%)	1 (8%)	0	1 (8%)
3. The amount of time spent discussing this was about right.	8 (62%)	4 (31%)	0	1 (8%)
Teaching Hand washing: Practice Activity				
1. The practice activity was useful.	9 (69%)	2 (15%)	0	2 (15%)
2. I will teach hand washing to my children.	10 (77%)	2 (15%)	0	1 (8%)
3. The amount of time spent on this activity was about right.	8 (62%)	4 (31%)	0	1 (8%)

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TABLE 2. Follow-up questions and responses. (n = 8)

Questions	Frequency (Percentage)
1. Have you taught proper hand washing to your children?	yes 8 (100%)
2. Which materials that you received at the training, were the most and least useful?	See Table 3.
3. Which, if any, of the materials did you send home to the children's' parents?	See Table 4.
4. Think now about the last week or two. About how many times each school day did your children wash their hands?	Range from 2 to 8 times/day
5. How does this compare with how often they were washing their hands before the training?	more often 7 (88%) about the same 1 (12%)
6. Would you say that the children are currently washing their hands for a longer, about the same, or a shorter length of time?	longer time 5 (63%) about the same 2 (25%)
7. Have you made any changes in the way you wash your hands or how you clean classroom items?	yes 7 (88%) no 1 (12%)

TABLE 3. Perceived usefulness of materials. (n = 8)

	Most useful	Least useful
The ABCs of Clean Teacher's Guide	6 (75%)	2 (25%)
Hooray for Hand washing audio cassette	5 (62.5%)	3 (37.5%)
Hooray for Hand washing Poster	8 (100%)	
Hooray for Hand washing story book	7 (85.5%)	
Sudsy Bubble Poster	7 (85.5%)	
Sudsy Bubble coloring books	4 (50%)	3 (37.5%)
Hippo in the Tub coloring book	2 (25%)	
5 Dirty Germs Finger Poem	4 (50%)	3 (37.5%)
Hand washing Rules for Home and School	6 (75%)	1 (12.5%)

TABLE 4. Materials sent home to parents. (n = 8)

Material	Frequency (Percentage)
A Family Guide to Better Health	4 (50%)
Hand washing rules for Home and School	4 (50%)
Hippo in the Tub or Sudsy Bubble coloring books*	1 (12.5%)
No materials sent home	3 (37.5%)

* The coloring books were intended for in-school use only